Fatal Occupational Injuries

Definition: Traumatic injury deaths occurring on the job.

Summary

In Washington, the annual occupational injury fatality rate was fairly stable over 1991-1993, ranging from 4.0/100,000 full time workers to 4.7/100,000. The annual number of deaths ranged from 97 to 112 over the same period. Washington's rates have been very close to the national rates since 1980. High-risk Washington industries include agriculture, construction, logging, and truck transportation.

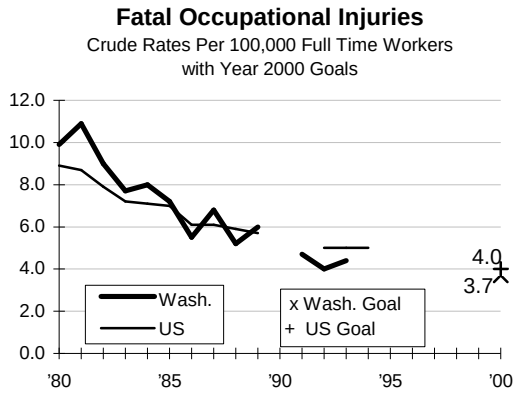
Time Trends

Washington rates of fatal occupational injury were somewhat higher than those for the US as a whole from 1980-84, and roughly similar to the US from 1985 to 1989.[1]

From 1991-1993, occupational fatality rates for Washington were fairly stable, ranging from 4.0 to 4.7 per 100,000. The total number of deaths per year ranged from 97 to 112. (See Data Source note for a discussion of the sources of the time trend data shown in the chart below, and an explanation of the gaps in the data for the years 1990 and 1991.)

Year 2000 Goal

Washington's goal is to reduce the rate of fatal occupational injuries to no more than 3.7 per 100,000 full time workers. The national goal is 4.0. Both of these goals appear achievable given recent trends.



Geographic Variation

The largest numbers of fatal occupational injuries in Washington in 1994 occurred in King (26), Spokane (13), and Pierce (11) counties. For counties with 5 or more fatalities, the highest rates observed in 1994 were for Chelan (17.6 per 100,000), Spokane (7.8/100,000), and Yakima (6.7/100,000) counties.

Age and Gender

For the 1980-89 period, US occupational fatality rates were much higher for males (9.8/100,000) than for females (0.8/100,000).[2] The largest *number* of fatalities was among the 25-29 age group (14%), followed by the 30-34 (13%) and 20-24 (12%) age groups. The age group 65 years and older had the highest fatality *rate* (14.6/100,000), followed by the 60-64 (7.9/100,000) and 55-59 (7.3/100,000) age groups.

Washington's Census of Fatal Occupational Injuries survey indicated that 94% (111/118) of 1994 occupational fatalities were male. Eleven percent were under age 25, 71% were 25 to 54 years, and 18% were 55 years or older.

Race and Ethnicity

National data indicate that whites represented 80% of US occupational fatalities in 1980-89. Blacks represented 11% of the total. Blacks had the highest occupational fatality rate (6.5/100,000), followed by whites (5.8/100,000) and Other races (4.9/100,000).

Ninety percent (106/118) of people killed on the job in Washington in 1994 were white, 3% were black, and 5% were other or unspecified. Three percent were of Hispanic origin.

Risk and Protective Factors

Transportation incidents caused 30% of Washington's 1994 occupational fatalities. The largest proportion of these were caused by highway vehicle collisions. Contact with objects and equipment (28%) and assaults (16%) were the second and third most common causes of occupational fatality in 1994.

Major industrial categories at high risk in Washington include Agriculture, Forestry, and Fishing (with a rate of 14.9/100,000), Construction (12.8/100,000) Transportation (20.9/100,000) and Lumber and Wood Products (44.7/100,000). The fatality rate for logging was particularly high (135.1/100,000, with 10 total deaths in 1994). Government workers also had a high occupational fatality rate (18.2/100,000).

Risk factors for occupational fatality vary by industry. Farmers and foresters are at risk because of machine or equipment-related accidents; truck drivers and aircraft crews are at risk of vehicle crashes. Those who work in the retail sector and handle cash are at risk of robbery and homicide; police officers are also at risk of homicide. Construction workers often work in dangerous environments involving heavy materials and elevations that may result in crushing injuries or falls.

Similarly, logging involves work with mechanical equipment and heavy trees. Miners are at risk of shaft cave-ins and accidents with machines or equipment.

Intervention Points, Strategies and Effectiveness

Strategies to prevent occupational fatalities differ according to the industry in which the events occur. In the trucking industry, requiring use of seat belts, lowering traffic speeds, and assuring that drivers have adequate sleep and rest periods are thought to reduce likelihood of crashes. In the construction industry, increased requirements for safety programs and plans at worksites are thought to have reduced the likelihood of falls and serious injuries. In the agricultural sector, safety improvements such as tractor roll-over bars have decreased the likelihood that tractor accidents will result in death. In the logging industry, increased use of automated logging procedures is associated with decreased human contact with machinery and related injuries. In the retail sector, many tactics have been hypothesized to reduce risk of robbery and homicide, including practices related to cash handling and staffing, and environmental changes in lighting and placement of cash registers.

It is the responsibility of employers to identify hazards specific to their industries and develop effective prevention strategies.

Data Sources

Recent fatal occupational injuries rates for the US as a whole (1992-94) and Washington State (1991-1994) were taken from data collected for the annual Census of Fatal Occupational Injuries (CFOI). At the state level, to be included in this data source the occupational injury must have occurred in Washington, or the death certificate must have been issued by Washington, the death must have occurred during the reference year, and the incident or exposure resulting in death must have occurred while the person was in work status. Information sources include death certificates, state workers' compensation reports, coroner reports, medical examiner reports, autopsy reports, US Occupational Safety and Health Administration (OSHA) reports, news media items, follow-up questionnaires, state motor vehicle reports, other federal reports, and miscellaneous sources.

Occupational injury fatality rates are also presented for the US as a whole and Washington State for the years 1980-89. These deaths were identified by the National Traumatic Occupational Fatality (NTOF) surveillance system, which includes fatalities that were designated as work-related on the death certificate. Detailed information on occupational fatalities for the US as a whole was also obtained from data collected by this system.

For More Information

Washington State Department of Labor and Industries, Safety and Health Assessment and Research for Prevention (SHARP)(360)902-5669

Endnotes:

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[1] Landrigan PJ, Markowitz S. Current magnitude of occupational disease in the United States. Ann New York Academy Sci 1989 572:27-45.

[2] Jenkins, EL, Kisner SM, Fosbroke DE, Layne LA, Stout NA, Castillo DN, Cutlip PM, Cianfrocco R (1993): Fatal injuries to workers in the United States, 1980-89: a decade of surveillance: national profile. Washington DC: US Government Printing Office, 1993. DHHS (NIOSH) publication number 93-108.